

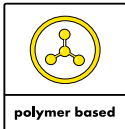
Polycrete LW

Shrinkage compensated lightweight concrete repair mortar

Polymer modified, shrinkage compensated, cementitious lightweight repair mortar

CHARACTERISTICS

- ▶ Premixed powder - requires only on site addition of water
- ▶ Shrinkage compensated
- ▶ Light weight
- ▶ Good adhesion on prepared surfaces
- ▶ Excellent durability, low permeability and weatherproof
- ▶ High build application, non slumping



DESCRIPTION

Polycrete LW is a polymer modified, shrinkage compensated, cementitious lightweight repair mortar. Polycrete LW is suitable for applications on vertical and overhead concrete surfaces.

FIELDS OF APPLICATION

Used for repair of:

- damaged, weak & de-bonded concrete
- honey combed concrete
- damaged R.C.C. sections after de-shuttering
- patch work repair on horizontal, vertical and overhead surfaces
- crack filler for concrete
- replacement of concrete suffering from attack of chlorides or sulphate

APPLICATION INSTRUCTIONS

Surface preparation

The surface of the concrete to be repaired should be sound, clean and uncontaminated. The decayed or damaged area should be saw cut, keeping the sides of the area as square as possible. Loose materials must be removed carefully using suitable means such as sharp tools or chipping hammer. If the reinforcement is corroded make sure that the back of the steel is completely exposed. Then clean the steel to bright metal condition.

Priming

- a. Reinforcement steel: On completion of the cleaning, prime the clean reinforcement steel using a zinc rich primer (Polyzinc*).



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- b. Concrete: In the event of severe concrete damage due to chloride attack, it is recommended to use a bonding coat like Polybond EP/Polybond AC before applying Polycrete LW.

To achieve optimum bond between fresh and cured section, Polycrete LW should be applied when the bonding coat is still tacky.

Mixing

Polycrete LW can be mixed by mechanical means. Slowly add the Polycrete LW powder to 4.0-4.5L of clean and gauged water (w/p ratio of 0.16 - 0.18) working well to produce a smooth mortar. The consistency of the mix can be adjusted by the addition of more powder or water as necessary.

Placing and finishing

Whilst the primer is still tacky, apply the mortar mix and compact well. Application can be done with trowel or a rubber hand glove to paste the material in place. Polycrete LW can be applied to desired thicknesses in layers on vertical and overhead surfaces. High build application can be achieved by using a formwork. While applying multiple layers, the previous layer should be cross hatched and allowed to set before applying the next coat. Polycrete LW can be applied to a thickness of 50 mm in one single

application if the ambient temperature is less than 25°C and the weather conditions are normal (no strong winds and low humidity) as this would result in rapid moisture evaporation.

Curing

Due to the presence of rapid drying polymers, the repaired area shall be cured in accordance with good concrete curing practice and protected from drying winds. Curing shall be done by non degradable type of curing compounds or wet hessian cloth. When cured with wet hessian cloth, the area shall be covered immediately with a high density polyethylene sheet which shall be taped to all edges.

CLEANING

Clean all tools with water immediately after use. Hardened materials can be removed mechanically only.

YIELD

Polycrete LW 15.7L/25kg (w/p ratio of 0.16)

STORAGE & SHELF LIFE

Store in a cool place dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air-conditioned rooms. Shelf life is up to 12 months in unopened conditions and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the quality of the product and reduce its shelf life.

SUPPLY

Polycrete LW 25kg bag

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

TECHNICAL SPECIFICATION

Typical properties achieved with w/p ratio of 0.16

PROPERTIES	VALUES	TEST STANDARDS
Color & appearance	Grey powder	
Mixed density, [g/cc]	1.85±0.05	ASTM D 1475
Application life, [minutes]	30	
Compressive strength @28 days, [N/mm ²]	>40	ASTM C 109
Flexural strength, @28 days, [N/mm ²]	>6	ASTM C 580
Shear bond strength, @28 days, [N/mm ²]	>20	ASTM C 882
Adhesion strength, [N/mm ²]	>1.5	BS 1881
Water absorption, [%]	<2.5	ASTM C 642 BS 1881
Water permeability @5 bar pressure	<10 mm	BS EN 12390
Rapid chloride permeability,	Low	ASTM C 1208
Application thickness Minimum, [mm/layer]	5	
Vertical, [mm/layer]	up to 50	
Overhead, [mm/layer]	up to 25	
Horizontal, [mm/layer]	up to 100	
Application temp, [°C]	5 to 45	

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.